

REMARKS:

This application has been carefully studied and amended in view of the Office Action dated May 4, 2004. Reconsideration of that action is requested in view of the following.

Pages 9 and 13 have been amended to provide antecedent basis for certain claim terminology which has been added to the claims in this amendment. The paragraphs added to pages 9 and 13 are based upon what is illustrated in the drawings and accordingly do not comprise new matter.

Various claims have been amended including the placing of Claim 29 in independent form. In addition, Claims 47-51 have been added. Since there are now five additional total claims and one additional independent claim a fee of \$176.00 is required by this amendment. The Commissioner is authorized to charge such fee to Deposit Account No. 03-2775 and to charge any other fee required by this amendment to that deposit account number.

Reconsideration is respectfully requested of the rejection of various claims relating to "paint read-through control structure" as based upon the disclosure not being enabling. In fact, the disclosure contains ample direction to one of ordinary skill in the art as to how to practice the invention in order to obtain "paint read-through control structure". The examiner's attention is directed to:

(1) the invention is intended to reduce the cure shrinkage strains (page 2, lines 10-13), (2) with the prior art when the stiffeners shrink upon curing, shrinkage strains are fed into the substrate whereby paint on the opposite face of the substrate would be patterned according to the induced strains of the substrate (page 5, line 18 to page 6, line 3), (3) the invention addresses "problems relating to paint read through which cause shadowing or metal distortion" (page 9, lines 16-18), (4) "read through is controlled...by punching or otherwise forming holes through all of the polymer and backing layers" (page 12, lines 17-20) and (5) the practice of the invention relating to the holes "would result in reducing or eliminating paint shadowing or metal distortion by reducing shrinkage strains during the polymer cure" (page 14, lines 1-5). It should be recognized that the disclosure is directed to one of ordinary skill in the art. Given the teaching of using the pattern of holes to address the read-through problem to reduce cure shrinkage strains, one of ordinary skill in the art would be able to readily practice the invention without undue experimentation and would know that there should be sufficient holes of sufficient size and of sufficient distance relationship to each other to result in the reducing of cure shrinkage strains. In other words, this aspect of the invention is the recognition that the provision of holes provides relief which reduces strains. Given that direction, one of ordinary skill in the art would readily know how to practice

the invention. Details of the type that might be in engineering drawings are not required for the disclosure to be enabling.

The objection to Claim 24 as being a substantial duplicate of Claim 22 has been considered. Examiner Vo is correct in this observation. Accordingly, Claim 24 has now been made dependent on Claim 23.

Reconsideration is requested of the rejection of all of the claims on the ground of obviousness type double patenting. Attached hereto is a Terminal Disclaimer to obviate the double patenting rejection. In that regard, the Terminal Disclaimer is identical to the previously filed Terminal Disclaimer. The Office Action, however, indicated that a second Terminal Disclaimer is required apparently because the first Terminal Disclaimer had been signed prior to the filing of the Associate Power of Attorney. Since a fee was submitted with the first Terminal Disclaimer, another fee should not be required. If any fee is required, however, with regard to this second duplicate Terminal Disclaimer the Commissioner is authorized to charge such fee to Deposit Account No. 03-2775.

Reconsideration is respectfully requested of the rejection of Claims 37 and 39-41 as anticipated by Mueller. Claim 37 has been amended to more clearly define the invention and as such Claim 37 and its dependent Claims 39-41 and newly added Claims 50-51 should be patentable over Mueller. The present invention, as recited in

parent Claim 37 relates to a reinforcement laminate of defined structure. The Mueller patent, on the other hand, relates to a bathtub. The Mueller bathtub comprises a plurality of various type layers which Examiner Vo has considered to be structurally the same as the reinforcement laminate of Claim 37 and its dependent claims. In order to highlight the differences between the claimed laminate and the bathtub of Mueller, Claim 37 has been amended to point out that the laminate has an outer surface formed by its carrier layer wherein the outer surface over substantially its entire area is of a smooth continuous contour. Such contour is either a flat contour or a curved contour. This is in striking contrast to the Mueller bathtub which is specifically referred to as a "shaped article" and which as shown in virtually every figure is not a smooth continuous contour. Rather, as illustrated in each of Figures 1-6 starting from left to right there is a vertical wall which merges into a horizontal wall at its top end with the horizontal wall merging into an inclined downwardly extending wall which then merges into a horizontal wall merging into an outwardly inclined upwardly extending wall that terminates in a horizontal outwardly extending flange. This is in striking contrast to the laminate defined in parent Claim 37 and illustrated, for example, in Figures 3-7 of this application wherein substantially the entire outer surface is of a smooth continuous contour although the invention contemplates the possibility of minor surface interruptions.

Since the Mueller bathtub is from a different art than the claimed laminate which is intended to function as reinforcement structure it would be repugnant to Mueller to change its contour so as to correspond to the claimed contour since such change in contour would be inconsistent with the type of contour intended for a bathtub. As such, Mueller does not anticipate parent Claim 37 and its dependent claims and would be an improper basis upon which to assert obviousness of the claimed invention.

Reconsideration is respectfully requested of the rejection of Claim 19 and its dependent claims as being unpatentable over Nomura. It is noted that dependent Claim 29 had not been included in this prior art rejection. Accordingly, Claim 29 has been written in independent form. In placing Claim 29 in independent form, however, the feature of former parent Claim 19 with regard to "paint read-through control structure" has not been incorporated in Claim 29 since that feature had been the basis of a rejection under 35 USC 112. Moreover, since parent Claim 19 had been rejected over the prior art it is assumed that the inclusion of that feature was not necessary for the combination of Claim 29 to be patentable over the prior art. Accordingly, as now presented in independent form Claim 29 avoids the section 112 rejection and corresponds to structure which had not been rejected over the prior art. As such, Claim 29 should be allowed.

Claim 19 has been amended to more clearly define the invention. In rejecting Claim 19 and its various dependent claims Examiner Vo relied upon the Nomura patent. Nomura relates to an auto ceiling panel which has holes of one diameter through one set of layers (sheet 4 and foam 2) and larger holes through the other layer (foam 3). Some of the holes in layers 2 and 4 overlap those in layer 3. Apparently, Examiner Vo considered the instances of overlapped holes to comprise the pattern of holes forming passageways extending through the laminate.

Claim 19 has been amended to clearly bring out the feature of the holes creating open passageways completely through the carrier layer and the expandable foamable layer of the laminate before the foamable layer is foamed and expanded. The holes as defined in Claim 19 thus extend through a foamable layer not a foamed layer. Since the reinforcement laminate is intended to address the paint read-through problem, it is important that these holes exist through the foamable layer before that layer is foamed-in other words before the shrinkage strains are created upon curing. When there is later curing, the foamable layer becomes foamed and expands. In the meantime, however, the preexisting pattern of holes functions to control paint read-through that would otherwise result by the creation of cure shrinkage strains. In contrast, the layers 2 and 3 of Nomura are "polyethylene foams" (col. 2, lines 19, 30-32, 34, 39, 59, 62). Accordingly, Nomura clearly does not

disclose having the holes formed in the layers before foaming takes place. Since Nomura is not concerned with providing paint read-through control structure, but rather is concerned with acoustical problems in an auto ceiling panel (col. 1, lines 40-43) it would not be obvious to preform the holes into the layers 2,3 while those layers have not yet foamed and expanded. Accordingly, parent Claim 19 patentably distinguishes over Nomura.

Note is also made of newly added Claims 47-49 which are dependent on Claim 19.

As now defined in Claim 47 the holes in the layers which form the passageways extending completely through the laminate result in each passageway having a straight continuous longitudinal axis. This is not the case in Nomura wherein the smaller diameter holes in layers 2 and 4 are staggered or offset with respect to the larger diameter holes in layer 3. As a result, in those instances where there is an overlap between the larger diameter holes and the smaller diameter holes any such resulting passageway would have a jagged or offset longitudinal axis formed by virtually all of the passageways resulting where there is an overlap of the small diameter holes and the large diameter holes. Note, for example, in Figure 1 of Nomura the first set of overlapping small diameter holes and large diameter hole on the right-hand portion thereof would have the longitudinal axis of the small diameter holes displaced to the left of the longitudinal axis through the large

diameter hole. This would result in a staggered longitudinal axis rather than a straight continuous longitudinal axis as now defined in Claim 47.

Claim 48 is dependent on Claim 19 and points out that each hole in the foamable layer is aligned with a hole in the carrier layer. This differs from Nomura where many of the small diameter holes are not aligned with a large diameter hole as clearly shown in Figure 1.


Newly added Claim 49 is dependent on Claim 19 and adds the feature of each passageway having a uniform diameter throughout its length. This also differs from Nomura where "the passageway" formed by the overlapping sets of holes has one portion of smaller diameter than the other portion.

In view of the above remarks and amendments this application should be passed to issue.

Respectfully Submitted,

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